GOVERNMENT OF THE DISTRICT OF COLUMBIA
Office of the Inspector General

Inspector General

January 7, 2002

Jerry N. Johnson
General Manager
D.C. Water and Sewer Authority
5000 Overlook Avenue, S.W., 3rd floor
Washington. D.C. 20032

Dear Mr. Johnson:

Enclosed is our final report summarizing the results of the Office of the Inspector General's (OIG) Follow-up Review at the District of Columbia Water and Sewer Authority (WASA). This follow-up audit, as well as the preceding audit are tools to aid WASA management in identifying weaknesses so that they may be corrected and to ensure that past deficiencies will not be repeated.

As a result of our follow-up audit, we directed recommendations to the General Manager of WASA that represent necessary actions to correct the described deficiencies. We want to acknowledge that WASA has reacted positively to our identification of specific safety and health issues, and has taken actions to address recommendations made and to develop and implement a viable safety program.

We appreciate the cooperation and courtesies extended to our staff during the audit. If you have any questions, please fell free to call me at (202) 727-2540, or William J. DiVello, Assistant Inspector General for Audits, at (202) 727-2540.

Sincerely,

Charles C. Maddox, Esq.
Inspector General

Enclosure

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GOVERNMENT OF THE DISTRICT OF COLUMBIA
OFFICE OF THE INSPECTOR GENERAL

FOLLOW-UP MANAGEMENT REVIEW OF THE DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

CHARLES C. MADDOX, ESQ.
INSPECTOR GENERAL

OIG No. 01-2-15LA **January 7, 2002**

TABLE OF CONTENTS

EXECUTIVE DIGEST

OVERVIEW

In November 1999, the Mayor instructed the Director of the D.C. Emergency Management Agency (EMA) to review reported concerns of a potential threat to the safety and health of the employees and nearby residents of the District of Columbia (D.C.) Water and Sewer Authority (WASA) Blue Plains Wastewater Sewage Treatment Plant (Plant). The EMA report issued November 5, 1999, identified safety and environmental concerns at the Plant and the Director of EMA requested that the Office of the Inspector General (OIG) perform a management accountability review of operations and practices at the Plant.

On November 7, 2000, the Office of Inspector General issued an audit report entitled "Management Review of the District of Columbia Water and Sewer Authority," OIG Report No. 00-2-02LA. The report disclosed that WASA did not have a viable safety program. The report identified deficiencies associated with WASA's safety program to include insufficient policies and procedures, training, and staffing. The report also determined that WASA was not in compliance with safety and health requirements and that previously reported conditions of safety and health violations continued to exist at the Plant.

On December 6, 2000, the D.C. Council Committee on Public Works and the Environment conducted a public hearing on the Inspector General's management audit of WASA. As part of those hearings, the Chairperson requested the Inspector General perform a follow-up review at the Plant. This report presents the results of that follow-up review.

CONCLUSIONS

Our original report included seven recommendations. We have determined that of these seven, WASA has taken sufficient steps to implement two recommendations. Actions taken by WASA and the D.C. Occupational Safety and Health Administration (D.C. OSHA) to address three others are ongoing, and two recommendations remain open. The seven recommendations are summarized below.

	Subject Matter of Original Recommendation	Directed To	Status
1	Adequately resolve all previous recommendations	WASA	ongoing
2	Ensure that potable water is provided to employees	WASA	open
3	Amend previous testimony to stakeholders	WASA	closed
4	Establish and maintain performance measures for bonuses	WASA	closed
5	Improve database elements for training and maintenance management (MMS) systems	WASA	ongoing
6	Reporting structure of Safety Committee	Bd. of Dirs.	open
7	Legislative authority of D.C. OSHA	D.C. OSHA	ongoing

EXECUTIVE DIGEST

We want to acknowledge that WASA has taken actions to address these recommendations and, moreover, to develop and implement a viable safety program. WASA has reacted positively to our identification of specific safety and health issues and has corrected identified deficiencies noted in our original report. Additionally, WASA has developed and begun implementation of many safety-related programs and policies since our original audit. However, many of these programs and policies are in their early stages of development and implementation and sufficient time has not passed to evaluate compliance or assess their effectiveness. Below are examples of the areas in which improvements are still needed.

- Tests of water fountains at the Plant indicate that potable water is not available to all employees. WASA has conducted tests of water fountains and has replaced more than 60 fountains even though tests continue to substantiate our original finding that the water contains lead and other bacteria and contaminants that exceed Environmental Protection Agency (EPA) limits.

- WASA's safety program has not been effective in reducing occupational illnesses and injuries. WASA's number of lost workdays attributed to occupational illnesses and injuries for calendar year 2000 increased over calendar year 1999 by more than 15 percent. Lost workdays because of occupational illnesses or injuries occurred at a rate of one every three calendar days. Lost workdays at WASA far exceed those experienced by comparable wastewater treatment facilities.

- WASA's new training database did not contain the data needed to ensure its employees meet minimum D.C. OSHA training requirements. The training database cannot be used to correlate training requirements to job titles, did not identify the training needs of at least one operator whose hospitalization could have been attributed to inadequate training, and is still unable to document that contractors have met D.C. OSHA training requirements. Further, data contained in the system had not been verified for accuracy by employees and is not accessible for review by employees.

- WASA's maintenance management record system is not complete. The system did not contain a complete inventory of all equipment and equipment inventory records did not document the performance of D.C. OSHA required maintenance.

EXECUTIVE DIGEST

CORRECTIVE ACTIONS

As a result of our follow-up audit, we directed recommendations to the General Manager of WASA that represent necessary actions to correct the described deficiencies. The recommendations in part centered on: 1) ensuring that potable water is provided to employees; 2) implementing programs aimed at reducing the number of occupational illnesses and injuries; 3) establishing specific milestones and timelines for the completion of actions to address issues identified as critical to the health and safety of its employees; 4) establishing requirements to ensure that the new training system contains accurate data and provides for the identification of classes required by job code, and the ability to query the system by employee, class date, and name; and 5) establishing requirements to ensure that the management maintenance system contains all equipment and maintenance work at required intervals, and addressing safety and health issues that remain a concern. Additionally, we are again including recommendations contained in our original audit report to WASA's Board of Directors and to the Director of the Department of Employment Services. These recommendations require the establishment of a direct reporting line from WASA's Occupational Safety and Health Department to its Board of Director's and reporting on the status of proposed legislation aimed at strengthening the regulatory enforcement powers of the D.C. OSHA.

On December 14, 2001, WASA provided a formal response to the recommendations in the draft report. WASA concurred with the report, its conclusions and its recommendations. WASA provided details of actions taken and planned to address the recommendations and emphasized that the safety of its employees and the general public is, and remains, of the utmost importance. We consider WASA's comments and actions taken to be responsive to the audit recommendations. The complete text of WASA's response is included at Exhibit D. We also received comments to a draft of this report from the Director of the Department of Employment Services (DOES) on December 11, 2001. In its response, DOES stated that it had entered into a Memorandum of Understanding (MOU) with the Office of Risk Management (ORM). Effective August 22, 2001, the occupational safety and health for government workers in the District of Columbia became the responsibility of ORM. We contacted the director of ORM and inquired as to any completed, planned, scheduled or cyclical inspections of the Blue Plains Wastewater Treatment Facility. We were informed that reviews have been scheduled on a regular basis and will commence in the first quarter of 2002. Based on the contents of the MOU, we believe that proper attention will be given to WASA to ensure compliance with OSHA regulations and it will aid in an improved safety program at the Plant. The full text of DOES's comments and the MOU with ORM is included at Exhibit E to this report.

INTRODUCTION

BACKGROUND

The mission of WASA is to provide retail water service and wastewater collection and treatment service to the District of Columbia and portions of the surrounding metropolitan area.

WASA was established as an independent agency pursuant to the District of Columbia Water and Sewer Authority Act of 1996, Pub. L. No. 104-184, effective August 6, 1996. As a result, WASA assumed certain major functions previously performed by the District, such as financial, procurement, and human resource services. WASA's daily operations are controlled by a General Manager who reports to an 11-member Board of Directors. The Board includes six representatives from the District and five from participating jurisdictions in Maryland and Virginia. The Board of Directors sets the vision and policy of WASA and approves the Master Plan, Financial Plan, and Capital Improvement Plan (CIP). The General Manager and the Deputy General Manager (Chief Engineer) provide overall direction and guidance to WASA staff. WASA employs approximately 1,150 employees and has over 300 contract employees working at the Plant. WASA's projected revenues for 2001 were estimated at $248 million.

WASA develops its own budget that is incorporated into the District's budget. The Mayor cannot adjust WASA's budget. Rates governing residential and commercial customers in the District are set by WASA's Board Members, while suburban jurisdictions pay a negotiated rate for use of the facilities. WASA's new organizational structure enables it to create its own regulations for finance, procurement, and human resource functions, and also to negotiate its own contracts and labor agreements.

WASA's facility at Blue Plains is the largest advanced wastewater treatment facility in the world. The Plant, located in the southwest section of Washington D.C. serves Fairfax County, Virginia; Loudoun County, Virginia; and Montgomery County, Maryland. The Plant was built in 1938. The entire facility consists of 154 acres and houses all the processes to treat wastewater and associated sludge. WASA is engaged in the business of water treatment and distribution and sewage collection. Specifically, WASA treats and disposes of sewage and liquid wastes delivered from sewage systems of the District of Columbia and surrounding jurisdictions in Maryland and Virginia. The Plant is designed to handle a maximum load of 370 million gallons of wastewater per day (in full tertiary treatment). WASA also purchases water from the Washington Aqueduct and distributes over 140 million gallons of drinking water daily for use by individuals and businesses. In addition, the plant serves as a refueling station for municipal vehicles. WASA is operated and regulated in accordance with the Clean Water Act, Clean Air Act, and EPA and D.C. OSHA Standards.

INTRODUCTION

OBJECTIVES

The audit objective was to follow up and review corrective actions taken by WASA on the conditions and recommendations contained in our prior audit report entitled, "Management Review of the District of Columbia Water And Sewer Authority," OIG No. 00-2-03LA, dated November 7, 2000.

SCOPE AND METHODOLOGY

Although the original audit report was issued in November of 2000, on-site fieldwork was completed in June of 2000. Therefore, in order to assess the actions taken by WASA to correct previously reported deficiencies, the audit scope of the follow-up audit primarily covered transactions for the period June 1, 2000, through May 30, 2001. We conducted inspections of the Plant buildings and grounds, and reviewed documents pertaining to health and safety issues. We also reviewed WASA's newly promulgated safety operating policies and procedures, as well as regulatory requirements established by the EPA and D.C. OSHA. We interviewed WASA's personnel, including supervisors, operators, and employees, and evaluated WASA's procedures for reporting occupational illnesses and injuries to the U.S. Occupational Safety and Health Administration and its accident investigations procedures. Additionally, we held discussions with WASA management through September 2001, to determine the status of various safety initiatives.

Our audit was conducted in accordance with generally accepted government auditing standards and included such tests as we considered necessary under the circumstances.

PERSPECTIVE

We acknowledge that the establishment of a comprehensive safety program is an ongoing effort. We believe that the first steps in establishing a comprehensive safety program is to evaluate the current program, identify its strengthens and weaknesses and correct any noted deficiencies. Our original audit identified noncompliance with D.C. OSHA requirements, safety and health concerns, weaknesses in management controls over channels of communication, insufficient documentation of expenditures, and an inadequate system development. In order to measure the progress made by WASA to establish a comprehensive safety program, we asked management to provide us with their view of its safety program. Additionally, at the entrance conference for our follow-up audit and throughout the follow-up review process, we requested copies of all reports and internal reviews performed on WASA's safety program since the completion of our original audit.

INTRODUCTION

At the entrance conference for the follow-up audit, WASA provided the OIG with an overview and briefing of accomplishments and actions taken since the issuance of our original audit report. Such actions included the completion of safety policies and programs, training conducted, employee involvement, and other completed and ongoing initiatives. A comprehensive listing of the action items reported by WASA and the OIG's evaluation of them are included at Exhibit A.

During the follow-up audit, WASA also prepared a Comprehensive Safety Program (CSP) to outline the steps necessary to ensure a safe and healthy work environment for WASA employees, customers, and the community. This report describes the accomplishments in the areas of policy development, management and administration, programs, training and support. In its CSP, WASA management acknowledges that the future continuity of WASA's Occupational Safety and Health (OS&H) Program depends on *full implementation* of all components of the CSP. Additionally, WASA management acknowledges that the OS&H Department must ensure ongoing leadership and guidance to meet this challenge. WASA's CSP, in its entirety, is included at Exhibit B. Our review of the CSP found it to be undated and unsigned. We were also unable to confirm that it was complete, whether it had been approved by management, or distributed to staff. Listed below are the key components of the CSP.

- Safety and Health Policies
- Safety Plan
- Written Safety Policies
- Safety Goals for WASA
- Employee Forums
- Safety Communication Plan
- Work Site Hazard Assessments
- Annual Facility Safety Inspection Program
- Accident Reporting & Investigation Program
- Management Safety Reporting System
- OS&H Department oversight of 20 Most Common Safety Programs
- Management Plan for Safety Training
- Departmental Safety Training Guidelines
- Emergency Planning and Training
- OS&H Department Administrative Manual
- Position-by-Position Safety Training Requirements

We were told that the WASA's OS&H Department had performed an assessment of its safety program and prepared a draft alert report with observations and associated safety deficiencies that continue to exist. This report was based on: (1) actual walk-through

INTRODUCTION

inspections by WASA's OS&H employees of WASA facilities, (2) a review of past and present safety and health documents, and (3) interviews with employees to gain a historical baseline to determine the present status and compliance with applicable D.C. OSHA, EPA and other regulations and guidelines. On September 27, 2001, WASA provided a matrix that identified components of its safety program that have been implemented or need to be implemented. The matrix is included at Exhibit C.

We again want to acknowledge that WASA has taken the initial steps toward the development of a comprehensive safety program. Additionally, it is important to emphasize that this follow-up audit, as well as the preceding audit are tools to aid management in identifying weaknesses so that they may be corrected and to ensure that past deficiencies will not be repeated.

FINDINGS

FINDING 1: COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH REQUIREMENTS

Our original audit determined that there was a general lack of awareness of or adherence to D.C. OSHA requirements at the Plant. WASA had taken steps to develop programs and processes to ensure compliance with D.C. OSHA standards; however, many safety policies and programs had not been implemented. During our follow-up audit, we noted that WASA had formalized and documented safety policies and programs. However, many of them were in the early stages of development and implementation, and sufficient time had not passed to evaluate compliance or assess their effectiveness.

Title 29 CFR § 1910.119 identifies 14 D.C. OSHA requirements of Highly Hazardous Chemicals. These standards define the roles and responsibilities of employers to ensure that the safety of both plant and contractor employees are considered. The D.C. OSHA standards serve as the most comprehensive list of safety programs and procedures. Additionally, process safety management (PSM) for wastewater treatment plants is designed to help the plant function safely. The WASA PSM program as described in its PSM Manual contains a description of all 14 D.C. OSHA elements at the Plant. Our original audit assessed WASA's compliance with 9 of these 14 elements.

The following is a brief discussion of the original findings, our follow-up findings and WASA's actions taken or planned to address these nine elements. In many of these areas the results of WASA's efforts are not clearly documented or identifiable other than through WASA's acknowledgement of their importance, and the inclusion of a plan to address or improve on each of these areas in its CSP. In some cases, WASA established special committees, programs, or policies to ensure compliance with D.C. OSHA elements. As stated earlier, many of these actions, are in their early stages and were not readily assessable at the time of our review.

Employee Participation

Our original audit reported that WASA officials could not provide adequate documentation to support their claim that they consulted with operating personnel to develop and conduct process-hazard analysis or other D.C. OSHA elements required under this standard. Additionally, process-hazard analysis and other safety policy-related documentation were only accessible to employees on weekdays, during the Safety Office's operating hours.

WASA officials stated in its CSP that employee involvement is an integral part in the overall development of the comprehensive program and that implementation of these

FINDINGS

elements is *vital* in realizing the success of the program. WASA's CSP defines employee involvement in the establishment of its safety program to include two areas of participation.

Employee Involvement

- WASA will actively promote and schedule forums and meetings to encourage employee participation and involvement in work safety, accident prevention, and loss control. This is demonstrated through employee safety committees and departmental liaisons.

- WASA developed and implemented a master communication plan to promote employee awareness, interest and participation in occupational safety and health programs. For example, this will be accomplished through weekly "tailgate talks," quarterly newsletters, and safety bulletins.

WASA also stated in its CSP that a union/management safety committee has been meeting on a regular basis and will continue to meet each month. Additional safety committees will be developed throughout the organization with management's support. While we were told that safety committees have been formed, we could not review minutes of these meetings, verify attendees, or review action items or completed actions.

Process-Safety Information (PSI)

Our original audit identified that WASA had existing PSI documentation prepared over the past five years by both outside consultants and by the WASA OS&H Office. The PSI documentation addressed specific areas such as its PSM Program, Emergency Operating and Response Plan and several iterations of its safety manual. Although PSI documents were available in the OS&H Office, there was no indication that PSI documents are readily available in other departments. However, the existing program manuals did not cover all safety elements necessary to meet D.C. OSHA regulatory requirements or industry safety practices.

We recognize WASA's acknowledgement of the importance of this element and that work in this area is ongoing. Additionally, during our follow-up audit, we noted that WASA had issued 19 safety-related policies and procedures and had updated material safety data sheets for buildings that contain hazardous materials.

FINDINGS

Process-Hazard Analysis

Our original audit identified that WASA did not adequately address deficiencies noted in previous process-hazard analyses. Our review identified hazard assessments for chlorine, sulfur dioxide, and sludge digester systems that were performed in 1999. However, it was reported in the 1995 EPA audit and again in the 1999 PSM audit that the process-hazard analysis performed on the chlorine systems did not include assessments required by D.C. OSHA and EPA. Missing assessments included an analysis of human factors, facility locations and previous incidents. Management stated that they are in the process of updating all process-hazard analysis at the Plant, and with the implementation of the CIP, the use of chlorine would be eliminated within the next 6 to 10 years, making this deficiency no longer an issue. While we recognize the effects of the implementation of WASA's CIP, WASA needs to address safety issues for both the current and future periods in order to maintain a safe work environment until hazards are eliminated.

Job-safety hazard analysis is reported as an important aspect of WASA's ongoing CSP. With the implementation of new work procedures and practices by employees involved in field activities, the OS&H Department staff must continually conduct job safety-hazard assessments to ensure that employees are appropriately trained to safely perform their new work activities and that they have the proper safety equipment.

Operating Procedures

Our original audit reported that WASA did not promulgate any safety policies or procedures. WASA management stated they had approximately 50 safety-related policies under review at that time. WASA management also stated that the policy review and implementation process took extensive time. We noted that safety policies had been drafted and under review, some for more than one year. Policies provide the structure for administering a safety program. Without them, employers' and employees' roles and responsibilities may be unclear, and situations could occur which result in accidents or injuries.

We recognize WASA's acknowledgement of the importance of this element and that work in this area is ongoing. Additionally, we noted that WASA had issued 19 safety-related policies and procedures since the completion of our original audit and has updated material safety data sheets for buildings that contain hazardous materials. We believe that WASA needs to continue to issue safety-related polices and procedures. Additionally, WASA should establish a means to ensure that policies and procedures are provided to all employees, properly adhered to and correctly and consistently interpreted.

FINDINGS

Training

Our original audit identified the following deficiencies with WASA's Safety Training Program. Specifically, WASA:

(1) did not have a formal recordkeeping system for tracking training requirements and attendance that would ensure:
   a) mandatory initial, safety, job-related, or refresher training had been conducted;
   b) certifications for safety training had been properly monitored and kept current;
   c) employee data, as it relates to safety classes completed for grandfathered employees, had been documented; and
   d) safety training and related records for contractor employees had been obtained, reviewed, and properly maintained;
(2) did not have adequate safety training schedules;
(3) did not conduct the required number of safety training courses to meet established requirements; and
(4) did not utilize cost effective measures to provide safety training.

Additionally, our original audit reported WASA's management information system was unable to associate job titles to D.C. OSHA training requirements. During that audit, we requested a listing of training that was specific to each job title so that we could verify that employees with specific job titles had received the corresponding safety and job-related training associated with their job descriptions/duties. At that time WASA was unable to provide the information but indicated they had purchased a new software package designed to capture pertinent training data and generate management reports. WASA anticipated implementation of the new system by the end of FY 2000.

Title 29 CFR § 1910.119(g) requires that each government and contract employee shall be trained on safety health standards, emergency operations, and safe work practices. Additionally, employers must document that each employee has received required training.

Inadequacies of the Training Database. During our follow-up audit, WASA officials announced that their new training database software system, "Abra Train" became operational in October 2000. We requested that WASA's Human Resources, Training and Development Manager (HRTDM) provide a listing of the total number of people who needed the following types of D.C. OSHA required training:

- Self-Contained Breathing Apparatus (SCBA)
- Respiratory Protection
- Process Safety Management

FINDINGS

- Personal Protective Equipment
- Hazard Communication
- Confined Space Entry
- Fall Protection
- Pathogens In The Workplace
- Occupational Noise Exposure
- Scaffolding
- Emergency Response

WASA's HRTDM responded that its training database system could not provide the management information we requested. As a result, without manually researching each of WASA's approximately 1,150 employees' training records, WASA cannot ensure that all employees have the D.C. OSHA required initial, safety, job-related**,** or refresher training requirements. Consequently, WASA cannot readily determine the adequacy of the training provided to WASA employees.

The significance of WASA's inability to ensure that its employees met minimum D.C. OSHA training requirements was highlighted during a significant chlorine leak that occurred on March 31, 2001. On that date, WASA experienced what is believed to be the largest chlorine leak ever recorded at the Plant. Two employees investigating the chlorine leak inhaled deadly chlorine gas and had to be evacuated to the hospital for treatment and observation. One employee who entered the building to investigate, exited the building gasping for air with his oxygen mask partially off. A preliminary serious incident report indicated the individual had inhaled chlorine because of an apparent problem with his SCBA respiratory protection facemask.

Our review of WASA's new database training records indicated that neither of these two individuals had received training in Respiratory Protection, Hazard Communication, SCBA, Personal Protective Equipment, or Emergency Response Procedures. Training records for one of the two individuals indicated his only training consisted of two courses, Sexual Harassment and Fire and Evacuation.

A second example of WASA's training database deficiencies was detected during our follow up of a chlorine incident. On October 21, 2000, an operator inhaled chlorine while changing chlorine railcars. An investigation concluded that the individual was not wearing his SCBA during the time he was connecting the new chlorine railcar[1]. Our review of the employee's training database records indicated he had not received the D.C. OSHA required training in the use of SCBA, Personal Protective Equipment, or Hazard Communications. If WASA's training database was capable of identifying the

[1] Our previous audit report contained a picture of an operator changing chlorine railcars without wearing his SCBA.

FINDINGS

required safety training for each employee based on job title, WASA could ensure that employees routinely exposed to hazardous chemicals received the required safety training as soon as possible.

Accuracy and Accessibility of the Training Database. The accuracy of WASA's training database has not been verified and is not readily accessible to WASA's employees. Although WASA's new training database has been operational since October 2000, its accuracy has never been verified. The establishment of the Abra Train database system involved inputting over 1,150 employees class attendance records from Microsoft Excel spreadsheets into the new software-training database.

The large number of employees, combined with numerous classes, subjected the new system to input errors. For example, in reviewing the training records for one of the individuals involved in the March 21, 2001, chlorine incident, we noted that his training database records indicated that he attended 11 hours of training on the same day, August 25, 1999. Seven hours of training were recorded for Process Safety Management and four hours of Operator-1 Training. Our review of the class attendance records for that day indicated the Operator-1 Training was only a two-hour course and not seven hours as reported. These and other potential errors exist because employees have not been asked to verify the accuracy of their training records (print-outs have never been provided to WASA employees) and because of limited accessibility to the training database for WASA employees. WASA's more than 1,150 employees can only access their training records through a single terminal located in the Human Resources Office, and many have not been trained on how to operate the new training database software system.

Contractor Safety Program

Our original audit disclosed that WASA did not have documentation to support that its contractor safety program had been implemented at the Plant. Specifically, there was no evidence that WASA had ensured that contractor employees were adequately trained, that contract performance was monitored, or that contractors were informed of hazardous conditions or chemicals at the Plant. Our review of WASA's Program Safety Management Manual disclosed that it contained a very comprehensive contractor safety program that addressed all D.C. OSHA requirements. The program consisted of contractor evaluations and related safety and training information. However, we could not find any indications that these forms were used or identified processes were followed.

Title 29 CFR § 1910.119(h)(2)(ii) requires employers to "inform contract employers of the known potential fire, explosion, or, toxic release hazards related to the contactor's work and the process[,]" and § 1910.119(h)(2)(iii) requires employers to "explain to contract employers the applicable provisions of the emergency action plan …."

FINDINGS

During our follow-up audit, we were advised that contractor-training records were now maintained by WASA's Training Director and Director of Occupational Health and Safety. Our initial interview with WASA's Training Director indicated that contractor-training records were maintained in his office. Our subsequent visit determined that those records were not maintained. Discussions with WASA's Director of Occupational Health and Safety (OS&H) produced training records for only 30 of the more than 300 current contract employees.

WASA officials provided us with proposed contract requirements for contractor training. Although implementation of the requirements on future contractors will help ensure contract training requirements are achieved, there was no documentation to indicate whether WASA's current contractors had met D.C. OSHA training requirements for each of their employees.

WASA recognizes the importance of contractors performing their activities in a safe and healthy manner and complying with the applicable safety regulations such as D.C. OSHA, EPA, D.C. Code, etc. Contractors must abide by WASA's policies and procedures and other regulatory and statutory guidelines when performing work on the WASA's property. Contractors failing to abide by the required safety requirements will be subject to the appropriate administrative action.

WASA officials added that safety requirements and standards are specified in the *Request For Proposals* (RFPs) contracting process and a review of safety records occurs during the selection process. Once a contractor is selected, there is an on-site WASA project manager and inspector tasked with the responsibility of ensuring that safety requirements are met. Additionally, WASA's OS&H Department works with these managers, as well as the designated contractor safety personnel, and conducts "spot checks" to ensure compliance. WASA's OS&H Department is also involved in the engineering-design review process to ensure that safety requirements are incorporated before a contract is awarded.

These added requirements will help ensure that contract employees are properly trained but do not remove WASA's responsibility under this element.

Accident Investigations

Our original audit reported that WASA did not investigate all accidents. Accidents and injuries reported to WASA'S Risk Management Department should be conveyed to WASA's OS&H Department for proper accident investigation. In order to ensure that WASA has a record of all reportable accidents or injuries, we compared accident and injury records for the period January 1, 2001, through March 31, 2001, from information

FINDINGS

obtained from WASA's insurance company, WASA's Risk Management Department, and WASA's OS&H Department.

Our review showed that records maintained by WASA's Risk Management Department identified 67 reportable occupational illnesses and injuries had occurred. Information maintained by WASA's OS&H Department only identified 25 illnesses and injuries, or less than half the number reported by the Risk Management Department. The Director of OS&H acknowledged that the prior administrative assistant may have misfiled accident and injury data. As a result, WASA's OS&H Director was not made aware of all accidents and injuries that occurred during this period and, therefore, was unable to complete the required investigations.

Also, our original audit disclosed that WASA had not accurately recorded all occupational injuries. For calendar year (CY) 1999, WASA's Risk Management Department documentation reported 125 occupational injuries. However, WASA's insurance company's claims records identified 156 occupational injuries, thereby indicating that WASA's Risk Management Department understated the number of injuries by 31 employees or about 20 percent. Additionally, for the period January 1, 2000, to April 18, 2000, WASA recorded 29 occupational injuries. Our review of related insurance company records identified a total of 50 reported injuries. Therefore, WASA understated its year-to-date injuries for CY 2000 by about 42 percent.

In an attempt to reduce accidents and injuries at the Plant, WASA has developed a management safety reporting system and has implemented an accident investigation program.

Management Safety Reporting System. A management safety reporting system was implemented as of the General Manager's June 2001 senior staff meeting. The safety reporting was developed to promote safety awareness and to ensure the participation of managers, supervisors and employees in advancing and enhancing safety performance.

Accidents are classified by type (slip/trip, fall, lifting, struck by, etc.) The classification of accident types is consistent with classifications used nationally by insurance and safety organizations, and will assist WASA in benchmarking its safety performance with similar organizations and established industry codes. The accident classification system also will enable the OS&H staff to identify safety concerns so that they can implement or reinforce preventive measures to reduce the risk of accidents.

The goal of WASA'S CSP is to provide regular summary reports of safety performance to managers of all work groups. The reporting system will provide information indicating safety and accident trends, positive and/or negative aspects of safety

FINDINGS

performance. It will assist in providing management and employees better information to improve safety performance as required.

In the absence of comparable data, we contacted a major metropolitan water processing facility to obtain data related to the number of accidents per calendar year. The facility contacted performs similar water treatment functions as WASA, and employs an estimated 1,600 employees compared to WASA's 1,150. That facility reported 459 work days lost for calendar year as compared to WASA's 5,590. While the implementation of WASA's reporting mechanism is fairly new, we hope that analyses can be performed based on the data accumulated and arrayed which will help to reduce the number of accidents at the Plant.

Accident Investigation Program. A formal accident investigation program has been established to ensure that all accidents and incidents (near-misses) are properly reviewed and/or investigated by a member of the OS&H staff. The established program requires participation at all levels of the organization, beginning with prompt reporting by the employee to his/her supervisor and ending with the completion of the appropriate accident reporting forms.

The initial accident investigation is conducted by the immediate supervisor and includes a review of what actually occurred and implementation of the appropriate accident prevention measures to prevent a reoccurrence of the accident or incident.
A member of the OS&H staff reviews each report, along with the supervisor's investigation, to ensure appropriate follow-through and to provide accident prevention assistance.

The departments of Occupational Safety & Health and Risk Management also coordinate their respective investigations of the accidents to ensure a corresponding approach to accident prevention and the minimizing of risk and/or cost related to accidents and injuries. The worker's compensation insurance carrier simultaneously transmits an e-mail of the employee's first report of the accident and/or injury to these two departments. Simultaneous reporting of the accident to the two work units enables an immediate investigation of the accident or injury.

The departments of Occupational Safety & Health and Risk Management have also developed a plan to meet as needed to reconcile their respective accident investigation findings. These controls should help to ensure that accidents are properly reported and recorded and that investigations are conducted to identify causes in order to minimize future occurrences.

FINDINGS

Emergency Planning and Response

Our prior audit reported that WASA's emergency response plan had not been annually reviewed or updated since 1995. We also reported that WASA had not complied with an EPA audit recommendation that the emergency evacuation plan be tested. Our follow-up audit noted the plan had been reviewed and updated but the evacuation plan had not been tested. WASA officials stated that the plan will be regularly updated and used as the model for developing other plans throughout the organization.

In regard to the tests of WASA's emergency response plan, WASA officials stated that such a drill would have to be coordinated with, at a minimum, officials from the District's EMA, Police, Fire and Rescue agencies, and neighboring businesses. They were unsure as to when, if ever, such an evacuation drill could be coordinated and performed. WASA officials added that evacuation drills have been conducted at various buildings on the Plant. No documentation was available to document drills conducted, the success of the drills, or an assessment of any lessons learned. We have been told that in light of recent events, security measures have been increased at the Plant, and preparation for a Plant-wide emergency evacuation drill is underway.

Compliance Audits

Our original audit disclosed that WASA conducted a PSM audit of its safety program in June of 1999, and that an independent environmental audit designed to assess compliance with hazardous waste management was conducted by an external agency in CY 2000. We could not find adequate support for actions taken in response to recommendations resulting from the latter audit.

WASA continues to address recommendations made in those reports aimed at ensuring compliance with hazardous waste management. Additionally, WASA has further expanded inventory controls to include less hazardous materials such as solvents, paint thinners, oil waste, and batteries.

FINDINGS

FINDING 2: SAFETY AND HEALTH VIOLATIONS

Our original audit reported that WASA did not make the safety and health of its employees a top priority. WASA's OS&H Department has historically been under-funded and understaffed. During our follow-up audit, we noted that WASA had hired a new safety officer and had filled vacancies within its OS&H Department. However, an analysis performed by the OS&H Department identified that the present staff of five employees, which includes an administrative assistant, is still 40 percent less than the resources WASA needs to operate a safe and reliable operation.

In regard to WASA's commitment to its safety program, we found that during our follow-up audit WASA had begun to initiate proactive measures to address health and safety issues. These measures include the establishment of committees to discuss safety issues and identify action items to address safety and health conditions. Other proactive measures include planned inspections of Plant grounds and buildings. Because these programs are in the early stages of development, we were unable to assess their effectiveness or employee compliance with newly instituted safety policies and procedures.

Pub. L. No. 91-596, § 5(a)(1) requires employers to furnish to each of its employees a place of employment that is free of recognized hazards that cause or are likely to cause death or serious physical harm. This law establishes WASA's general and overall responsibility for the safety, health, and welfare of WASA and contract employees. Additionally, WASA's Master Agreement on Working Conditions with its unions prohibits an employee from being required to work in unsafe or dangerous conditions until such conditions have been removed, remedied, rendered reasonably safe or adequate protection is provided for the condition encountered.

The following is a discussion of the areas with reported deficiencies contained in our original audit report and the actions taken or planned by WASA to address them.

Protective Equipment

Our original audit reported that WASA operators and contract employees were not provided or did not have access to adequate personal protective equipment (PPE). PPE includes such items as protective clothing and shoes, glasses, and breathing equipment. WASA management stated that they are not responsible for providing PPE to contractors and that employees have not informed them of their needs for such items. According to D.C. OSHA regulations, the employer is responsible for requiring that employees wear

FINDINGS

appropriate personal protective equipment in all operations where there is an exposure to hazardous conditions.

We noted the following conditions:

Protective Clothing. Our original audit disclosed that WASA operators and contractors working in the Lime, Grit Chamber, Solids Processing, and Chlorine Buildings did not wear adequate PPE. During our follow-up audit, we observed employees and contractors wearing appropriate protective equipment at various plant locations.

Self-Contained Breathing Apparatus (SCBA). During our original audit, we observed and reported to WASA management that SCBAs were not available at many locations identified in WASA's Emergency Response Plan. During our follow-up audit, we noted that WASA's emergency response plan had been updated to exclude the locations of SCBA. Additionally, previously designated locations for SCBA equipment had been removed. We were informed by employees that SCBA was available in the OS&H Department or in locked cabinets in select buildings. We believe that SCBA should be kept in designated locations in the buildings which house hazardous chemicals and such locations should be documented. Additionally, SCBA should be within reasonable reach of those persons working in areas where a real and present danger exists of rapid air contamination from toxic agents.

Respiratory Protection Program. Our original audit reported that WASA could not provide any documentation to demonstrate that they had developed or implemented a Respiratory Protection Program as required by 29 CFR § 1910.134. During our follow-up audit, WASA reported in its CSP, that a Respiratory Protection Program was formally implemented as part of 21 safety and health policies. The policy outlines the requirements for the appropriate selection and use of respiratory protection. The procedures apply to all WASA personnel working in areas or performing activities where respiratory protection is required. The policy clearly identifies the responsibilities of management, supervisors and employees regarding the selection and appropriate use of respirators. Employees are required to be fit-tested for respiratory equipment and provided medical examinations to verify their ability to wear respiratory protection.

Our follow-up review of training records and discussions with WASA employees found that only a limited number of employees working with chemicals at the plant are provided respiratory protection, training, fit-tests, and medical examinations on a regular basis as required. This is another example of a program that is in its early stages and full compliance has yet to be attained.

FINDINGS

Ventilation

In our original audit, we noted that several buildings at the Plant had inoperable or inadequate ventilation systems; most notably, the Lime Building. It was also noted that the ventilation systems in the Grit Chamber and Chemical Buildings were not adequate.

During our follow-up audit, WASA stated that many of the buildings in question were part of WASA's overall CIP and that the issue of ventilation would be addressed with the improvements or replacement of these buildings. We recognize that there is added cost associated with replacing and repairing ventilation systems in buildings that are slated for demolition; however, interim accommodations need to be made until such time that the renovations and replacements are completed. These actions need to be taken in the interim to ensure that workplaces have adequate ventilation. For example, during our original audit, we were told that the Lime Building would be demolished within six months. As of the completion of the fieldwork of our follow-up audit, 12 months had passed and the Lime Building and lime conversion process to replace it had not yet been started. The Lime Building still operates with an inadequate ventilation system.

Confined Space

A confined workspace is a designated area which, when entered, requires the use of appropriate gear, safety equipment, and adherence to specific permit requirements, procedural compliance and supervision. Our original audit reported that WASA did not properly identify confined spaces, did not ensure that WASA employees and contractors complied with confined space permit requirements, and did not maintain proper supporting documentation for confined space permits. WASA's Safety Director stated that confined spaces identified in WASA's Hazard Assessment Plan were not correct and that he was in the process of updating WASA's Hazard Assessment Plan.

During our follow-up audit, we noted that WASA's Hazard Assessment Plan has been updated but does not identify confined spaces. Identification of confined spaces is critical to provide proper guidance as to the protocols for entering and working in confined spaces.

Housekeeping

During our original audit, we conducted walk-through inspections of several buildings at the Plant. Our original audit concluded that the general condition of the buildings and grounds demonstrated the lack of a proactive safety program and a general lack of good housekeeping in work areas. The report identified such things as unsanitary restrooms;

FINDINGS

cobweb infested work areas; missing railings, grates, and catwalks; inoperable eyewashes and showers; inoperable and missing back-up lights and exit signs; and fire extinguishers that had not been re-certified or hydrostatically charged.

In December 2000, D.C. OSHA inspectors inspected the Central Maintenance Building and again found the same type of safety violations identified in our original audit report. In February of 2001 the D.C. Fire and EMS Inspector performed inspections of three buildings and also found the same types of safety violations identified in our prior report.

For example, during a D.C. Fire and EMS inspection on February 16, 2001, the methanol alarm activated, indicating a potential leak of highly flammable methanol. D.C. Fire and EMS personnel cited WASA for ignoring the early warning system alarms. Documentation indicated the alarms frequently malfunctioned and operators continually disregarded the early warning system. From a safety standpoint, warning alarms on hazardous material systems such as methanol are paramount in protecting workers and the public during emergency situations. Operators must be properly trained to respond to alarm warnings. If the alarm is not functioning appropriately, procedures must be implemented to assure the safety of all concerned. Additionally, periodic inspections should be conducted to test and replace any alarms that are not functioning properly.

Subsequent to the D.C. OSHA and Fire and EMS inspections, WASA initiated a program to identify and prevent many of the housekeeping violations from recurring. Performance factors were developed for supervisors that included annual rating elements for safety. In March 2001, WASA formed a Housekeeping Subcommittee. The subcommittee developed a comprehensive plan with goals to address plant housekeeping, appearance, and upkeep. Section chiefs were assigned specific portions of the Blue Plains facility and provided detailed checklists to identify and correct, among other things, missing or inoperable handrails, windows, doors, machinery safeguards, eyewash equipment, fire extinguishers, and exit signs. The committee included provisions for identifying broken ladders, electrical hazards, open holes and standing water, and initiated a process for expediting work orders to make repairs when needed.

In March and April of 2001, the Housekeeping Subcommittee conducted plant-wide inspections. During our follow-up audit, we noted the general improvement in plant appearance attributed to the efforts of the Housekeeping Subcommittee.

Machine/Chain Guards

Our original audit reported that machine guards were missing or inadequate. Specifically, machine guards and covers were missing from several pumps in the galleys and outside the solids processing area. Safety studies have identified missing machine guards as one of the prime causes for accidents.

FINDINGS

During our inspection of the Blue Plains facility in April 2001, in the span of about 20 minutes in the nitrification sedimentation fields area, we observed 12 pumps that were missing the required chain guards, trip hazards, and various missing grates and railings. When brought to the attention of WASA management, they informed us that these safety hazards were corrected.

Railings, Grates, and Catwalks

Our original audit disclosed numerous deficiencies with the condition of railings, grates, catwalks, and other similar areas at the Plant. Slips, trips, and falls are common mishaps in wastewater treatment facilities. In order to ensure that a safe work environment exists, areas such as these must be in proper repair, free of debris and other substances that may create slippery conditions or possible trip hazards.

Our original audit report contained a photo of an area temporarily covered with boards in lieu of a concrete walkway that had deteriorated from chemical exposure. WASA officials indicated that the deteriorating concrete walks were roped off and scheduled for replacement. On February 9, 2001, during our follow-up audit, another concrete walkway collapsed, injuring a contract employee who required medical attention. A note in the file indicated an accident report had not been turned in but that "the blocks have broken in the past and this is not a new problem." During our follow-up audit, WASA had not posted warning signs to help prevent similar accidents.

Additionally, in the west sedimentation field areas, operators pointed out plywood boards used to partially cover open holes, in place of missing permanent metal grates, in several locations throughout the facility, to include the chemical building. We noted that some of these boards had protruding nails (trip hazards) as well as chemical deterioration. Due to the age of the Plant and the continuous exposure to damaging chemicals, WASA needs to conduct periodic inspections of its walkways and immediately address all hazards to ensure that they are safe.

Eyewashes and Showers

Our original audit reported that eyewashes throughout the Plant were not functioning or not properly maintained. Additionally, many of the eyewashes did not have caps over the waterspouts to prevent dust, dirt, chemicals, and other contaminants from entering the equipment. An employee would need to use an eyewash/shower to flush or rinse their eyes or skin with water if exposed to chemicals or other contaminants.

FINDINGS

Inspections conducted during our follow-up audit revealed that the previously reported deficiencies with eyewashes and showers in the Lime, Chemical Laboratory, Solids Processing, and Grit Chamber Buildings had been corrected. However, the emergency eyewash for the Chemical Building remained inoperable.

Potable Water

Title 29 CFR § 1910.141(b)(1)(i) provides, "[p]otable water shall be provided in all places of employment …."

During our prior audit we issued a Management Alert Report indicating that WASA did not always provide potable water to its employees and we cited the water test results for lead and bacteria content that exceeded federally-prescribed limits. At one location, the lead content was 10 times the allowable limit.

WASA, subsequent to our follow-up audit, tested 41 additional water fountains and test results confirmed our original observations that potable water was not always available to its employees. The tests performed by WASA, based on our recommendation, indicated that 8 of the fountains (or 20 percent) tested contained lead in excess of federal limits. The 20 percent contamination rate for unsafe drinking water is in itself alarming. Two of the fountains tested contained more than 100 times the minimum EPA allowance for lead. As a result of those tests, WASA replaced over 60 water fountains at the plant.

On May 16, 2001, near the end of our follow-up audit, water samples were taken at two locations based on an employee complaint. The test results, made available on June 28, 2001, indicated neither of the two water fountains was within the EPA guidelines for lead. One of the fountains exceeded EPA's permissible copper standard by almost 700 percent and the other fountain exceeded EPA's lead standard by almost 400 percent.

It is important to note that the water samples taken on May 16, 2001, were taken after WASA had installed new water fountains. The new water fountains were installed because WASA believed the source of the metal contaminants was attributed to a specific manufacturer's type of water fountain. The most recent tests, however, and those taken in December 2000, indicate that WASA has not yet identified the source of the contamination. It appears the contamination is either attributed to the pipes leading to the water fountains or to the plumbing behind the water fountains. To our knowledge, these conditions still exist.

Safety Operating Procedures

Title 29 CFR §§ 1910.119(f)(2) and (3) require employers to make safety procedures readily accessible to all workers at the plant and make an annual certification the

FINDINGS

procedures are current and accurate. Title 29 CFR § 1910.119(f)(1) requires employers to "develop and implement written operating procedures that provide clear instructions for conducting activities involved in each covered process consistent with the process safety information …."

WASA operating personnel informed us that they have been provided copies of WASA's recently promulgated Safety Policies and Procedures, the basic structure for administering WASA's safety program. We previously reported that although WASA had approximately 50 safety-related policies and procedures under review, none had been finalized and distributed to employees. During our follow-up audit we noted WASA had approved and issued 19 safety policies and procedures. Although we acknowledge that WASA finalized 19 safety policies and procedures, the procedures were not effectively distributed to all WASA employees. WASA made only limited distribution of the procedures and posted them on their Plant-wide Interactive Employee Reference System (PIERS) website. However, lower-level employees and operators still do not have access to those policies and procedures because WASA's PIERS website is only available to supervisors and above. In order to properly disseminate policies and procedures, they must be provided and made available to all employees.

Hotline

Our original audit reported that WASA's internal channels of communication were ineffective in relaying information between management and employees for reporting safety-related issues. We also found that WASA did not effectively use its hotline as a means to solicit employee comments or receive reports of safety-related issues.

During our follow-up audit we noted WASA's employee newsletter "HR Corner" did not advertise its hotline as a means for reporting unresolved safety issues, nor did we observe posted placards or other signage identifying who to notify in the event of a safety-related incident or emergency. The display of safety hotline posters fosters safety awareness throughout the Plant and also serves as an early-warning mechanism for identifying potential safety hazards.

During the period of June 1, 2000, through March 31, 2001, we noted that WASA's hotline received no phone calls. Additionally, WASA reported in its safety and health assessment that emergency telephone numbers are not properly displayed. WASA officials contend that they have an adequate channel of communication and that the absence of any calls to its hotline is not an indicator that employees are not provided adequate channels of communication. We find this assessment questionable due to the fact that WASA does not actively promote the use of or advertise its hotline and WASA management themselves did not know the hotline number. In developing a safety-

FINDINGS

oriented culture, WASA needs to build confidence among its employees by actively encouraging use of the Safety Hotline. This may be accomplished by rewarding employees for reporting genuine safety hazards. WASA needs to recognize that elimination of safety hazards has a direct monetary benefit for WASA, to be realized through avoidance of excess workers' compensation costs and lost work days, and by increasing the efficiency of Plant-wide operations.

Emergency Back-up Lights and Exit Illumination

Our original audit reported that numerous emergency lights and exit signs that illuminate exits routes and stairways in the event of fire or a power outage were inoperable or missing. Reports issued by D.C. OSHA and D.C. Fire and EMS inspectors during our follow-up audit also reported violations in these areas. It is the position of WASA officials that many of these deficiencies will be addressed with the implementation of its CIP. Also, it was WASA's intention to allow the inspectors to perform inspections without first performing inspections themselves or making improvements. WASA stated that they have developed a proactive safety program and will begin to perform routine inspections of buildings to ensure that emergency lights and exit signs are in proper working order once initial inspections by external agencies are completed.

Ladder Inspection Program

Our original audit reported that WASA did not have a ladder-safety program. We observed ladders on the premises that were rotted and unstable. During a walk-through of the Nitrification Building, the Safety Director had a ladder destroyed that was missing the lock securing the metal spreader device. We also observed employees using ladders without taking proper precautions such as properly securing the ladder or being accompanied by another employee. We also identified injuries that have occurred at WASA due to defective ladders.

D.C. OSHA regulations require employers to identify ladders and implement a program to ensure that all ladders are maintained in good condition. We noted that WASA did provide ladder-safety classes. During our follow-up audit, WASA's Director of OS&H stated that ladder inspections would be conducted during routine plant and building inspections.

Fire Extinguisher Inspection Program

Our original audit reported that WASA did not have an effective program for identifying fire extinguishers that require re-certification or hydrostatic testing. Additionally, we identified numerous fire extinguishers in the Administration, Chlorine, Grit Chamber,

FINDINGS

Chemical, Chemical Laboratory, Maintenance, Lime, and Nitrification Buildings that had not been inspected or certified for more than 3 years. In some instances, fire extinguishers were missing entirely. WASA completed an inventory of fire extinguishers in response to our February 7, 2000, MAR and issued a Request For Proposal for a contractor to re-certify or replace, as necessary, all fire extinguishers at the Plant.

Title 29 CFR §§ 1910.157(e)(1) - (3) provide, in part:

> the employer shall be responsible for the inspection, maintenance and testing of all portable fire extinguishers in the workplace. Portable extinguishers or hoses . . . shall be visually inspected monthly. The employer shall assure that portable fire extinguishers are subjected to an annual maintenance check …. The employer shall record the annual maintenance date and retain this record for one year after the last entry ….

The EPA reported in January 2001 that fire extinguishers had not been inspected, were not readily accessible, and that emergency eyewashes were not available in the hazardous waste storage building. Fire extinguishers were observed that had not been serviced. WASA's inventory of fire extinguishers, which indicated many fire extinguishers were last serviced in 1999, was incomplete, thereby preventing us from determining if additional fire extinguishers were missing. WASA representatives did not see the need for an inventory of fire extinguishers. In our opinion, an accurate inventory is necessary to ensure that all fire extinguishers have been serviced and to identify missing equipment.

During the March 26, 2001, follow-up audit entrance conference, WASA officials indicated an annual fire extinguisher maintenance program had been established. On May 2, 2001, WASA awarded a contract for fire extinguisher maintenance and servicing.

Elevator Inspections

Our original audit reported that elevator inspection certificates in the Central Operations Building indicated that the elevator was last inspected in 1979. Additionally, the elevators in the Central Maintenance Building and the Laboratory were last inspected in 1980. WASA management stated that they were in the process of obtaining certifications for these elevators.

During our follow-up audit, we confirmed that elevator inspections had been completed on January 23, 2001.

FINDINGS

Maintenance Management System

One of the main purposes of a maintenance management system (MMS) is to ensure timely completion of routine maintenance work. Our original audit reported that WASA management acknowledged that the WASA's MMS did not provide the information needed for effective maintenance management and indicated WASA was in the process of implementing a new system. During our follow-up audit, almost one year later, WASA was still in the process of implementing a new system.

The need for an effective and reliable MMS was also highlighted during an incident that occurred on September 25, 2000, when an overhead crane cable broke in the solids-processing loading area, fortunately producing no injuries. D.C. OSHA requires monthly documented inspections, and preventative maintenance of all overhead cranes to ensure worker safety and prevent accidents. Personnel platforms, baskets, and rigging suspended from a crane or hoist hooks are also required to be load tested annually.

During our follow-up audit, we requested an inventory of all cranes and maintenance records documenting the performance of preventative maintenance and inspections. WASA's MMS was not capable of providing either an inventory of cranes or documentation to show they had complied with D.C. OSHA's annual maintenance inspections or load tests. There was no documentation that the crane located in the solids-processing loading area was ever inspected or load tested. Until WASA develops inventory and maintenance records for all cranes, and performs the preventive maintenance in accordance with D.C. OSHA inspection criteria, the risk of similar crane accidents remains high.

RECOMMENDATIONS

RECOMMENDATIONS

As a result of our follow-up audit, we request that the individuals identified below respond to the five recommendations that remain open or are ongoing. Management has previously provided comments on these recommendations in response to our original audit report. However, we ask that additional comments be made, including specifics as to the current status of on-going actions, work completed or planned, and specific dates for resolution.

Recommendation 1. We recommended that the WASA's General Manager:

Perform tests necessary to determine the quality of drinking water at the Plant. Tests should address lead and bacteria content, as well as the report of backflow siphonage. Additionally, make potable water readily available to all employees.

WASA RESPONSE

In its response, WASA officials stated that they have been responsive to the concerns for the quality drinking water and are not aware of any current issues related to quality of drinking water at the Plant. They have replaced fountains and will continue to regularly test the water and respond to employee concerns.

OIG COMMENT

The actions planned and taken by WASA should correct the conditions noted.

Recommendation 2: We recommended that the WASA's General Manager:

Establish controls to ensure that new training and MMS systems provide for or contain, at a minimum, the following elements.

- Training

  - data fields to record initial, safety, job-related, or refresher training conducted;
  - controls to ensure that employee safety training certifications are monitored;
  - documentation to support grandfathered employee certifications;
  - documentation of safety training and related records for contractors;
  - comprehensive safety training schedules that meet established requirements; and
  - controls to use the most cost effective measures to provide safety training.

RECOMMENDATIONS

- Maintenance Management System

  - all equipment and machinery at WASA, and
  - all work to include painting, electrical, plumbing, and lawn care.

WASA RESPONSE

WASA stated that the implementation of its Maintenance Management System has commenced and will consider further development and improvement of its training database.

OIG COMMENT

The actions planned and taken by WASA should correct the conditions noted.

Recommendation 3. We recommended that the WASA's General Manager:

Establish specific milestones and timelines for the complete development and implementation of programs aimed at reducing the number of occupational illnesses and injuries.

WASA RESPONSE

In its response, WASA identified continuing adjustments that are being made regarding the above issues and specific actions taken and planned in these areas.

OIG COMMENT

The actions planned and taken by WASA should correct the conditions noted.

Recommendation 4. We recommended that the WASA's General Manager:

Establish specific milestones and timelines for the completion of actions to address the following issues identified as critical to the health and safety of its employees:

- conducting a Plant-wide emergency evacuation drill;
- providing SCBA access to all employees;
- ensuring adequate ventilation in all buildings;
- identifying confined spaces at all Plant locations;

RECOMMENDATIONS

- inspecting machine chain guards, railings, grates, and catwalks to ensure their safety;
- posting of safety-related signage;
- disseminating safety-related policies and procedures; and
- performing inspections and maintenance of ladders and equipment associated with cranes and hoist hooks (personnel platforms, baskets, rigging, etc.).

WASA RESPONSE

In its response, WASA identified continuing adjustments that are being made regarding the above issues and specific actions taken and planned in these areas.

OIG COMMENT

The actions planned and taken by WASA should correct the conditions noted.

Recommendation 5. We recommended that the Chairman of WASA's Board of Directors:

Require WASA's Safety Committee to report its activities jointly to the General Manager and to the Board to ensure that the Board is obtaining and reviewing pertinent safety issues, and taking appropriate action on identified safety deficiencies at the Plant as well as those included in audit and consulting reports.

WASA RESPONSE

In consultation with the Chairman of WASA's Board of Directors, WASA officials believe that the reporting relationship of the Safety Committee should remain through the General Manager. The Board of Director's has created a Safety and Emergency Planning subcommittee as a component of its standing operations committee. They believe that the establishment of a Board level committee to specifically focus on safety issues is an appropriate and efficient way to monitor and direct the safety and emergency planning activities at the Plant.

OIG COMMENT

The actions taken by WASA should provide adequate channels of communication between the Safety Office and the Board of Directors, and provide for an appropriate and efficient way to monitor and direct the safety and emergency planning activities at the Plant.

RECOMMENDATIONS

Recommendation 6. We recommended that the Director of the Department of Employment Services:

Provide the status of the proposed enhancements and legislative action aimed at strengthening the regulatory effectiveness of D.C. OSHA.

DOES/ORM RESPONSE

In its response, DOES stated that it had entered into a Memorandum of Understanding (MOU) with the Office of Risk Management (ORM). Effective August 22, 2001, the occupational safety and health for government workers in the District of Columbia became the responsibility of ORM. We contacted the director of ORM and inquired as to any completed, planned, scheduled or cyclical inspections of the Blue Plains Wastewater Treatment Facility. We were informed that reviews have been scheduled on a regular basis and will commence in the first quarter of 2002. Based on the contents of the MOU, we believe that proper attention will be given to WASA to ensure compliance with OSHA regulations and it will aid in an improved safety program at the Plant.

OIG COMMENT

The actions planned and taken by DOES/ORM should correct the conditions noted.